

**GE Betz**

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Material Safety Data Sheet

Issue Date: 24-JAN-2003

EMERGENCY TELEPHONE (Health/Accident): (800) 877-1940

1 PRODUCT IDENTIFICATION

PRODUCT NAME:

FUELSOLV PB2020

PRODUCT APPLICATION AREA:

FUEL TREATMENT

2 COMPOSITION / INFORMATION ON INGREDIENTS

Information for specific product ingredients as required by the U.S. OSHA HAZARD COMMUNICATION STANDARD is listed. Refer to additional sections of this MSDS for our assessment of the potential hazards of this formulation.

HAZARDOUS INGREDIENTS:

CAS#	CHEMICAL NAME
91-20-3	NAPHTHALENE Irritant; absorbed by skin; sensitizer; toxic to liver, kidney, and blood; causes nasal tumors in rats
64742-94-5	SOLVENT NAPHTHA, PETROLEUM, HEAVY AROMATIC Combustible liquid; irritant (eyes)
112-34-5	DIETHYLENE GLYCOL MONOBUTYL ETHER Irritant (eyes)
61790-69-0	FATTY ACIDS, TALL OIL, REACTION PRODUCTS WITH DIETHYLENETRIAMINE Corrosive
68412-54-4	NONYLPHENOXYPOLYETHOXYETHANOL BRANCHED Severe irritant (eyes)

No component is considered to be a carcinogen by the National Toxicology Program, the International Agency for Research on Cancer, or the Occupational Safety and Health Administration at OSHA thresholds for

carcinogens.

3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING

May cause moderate irritation to the skin. May cause dermatitis.
May be absorbed. Severe irritant to the eyes. Vapors, gases, mists
and/or aerosols cause irritation to the upper respiratory tract.
Prolonged exposure may cause dizziness and headache.

DOT hazard: Combustible liquid

Emergency Response Guide #128

Odor: Hydrocarbon; Appearance: Amber To Dark Brown, Liquid

Fire fighters should wear positive pressure self-contained breathing
apparatus (full face-piece type). Proper fire-extinguishing media:
dry chemical, carbon dioxide or foam--Avoid water if possible.

POTENTIAL HEALTH EFFECTS

ACUTE SKIN EFFECTS:

Primary route of exposure; May cause moderate irritation to the
skin. May cause dermatitis. May be absorbed.

ACUTE EYE EFFECTS:

Severe irritant to the eyes.

ACUTE RESPIRATORY EFFECTS:

Primary route of exposure; Vapors, gases, mists and/or aerosols
cause irritation to the upper respiratory tract. Prolonged exposure
may cause dizziness and headache.

INGESTION EFFECTS:

May cause abdominal pain, nausea, vomiting, dizziness, lethargy and
blurring of vision. Cardiac failure and pulmonary edema may
develop. Large doses cause severe kidney damage. May be fatal.
Aspiration may cause lung injury or death.

TARGET ORGANS:

Prolonged or repeated exposures may cause CNS depression,
defatting-type dermatitis, and/or toxicity to the liver, kidney,
and blood system.

MEDICAL CONDITIONS AGGRAVATED:

Not known.

SYMPTOMS OF EXPOSURE:

Excessive dermal exposure causes defatting and drying of skin.
Excessive inhalation of vapors causes dizziness, headache and
nausea.

4 FIRST AID MEASURES

SKIN CONTACT:

Wash thoroughly with soap and water. Remove contaminated clothing. Thoroughly wash clothing before reuse. Get medical attention if irritation develops or persists.

EYE CONTACT:

Remove contact lenses. Hold eyelids apart. Immediately flush eyes with plenty of low-pressure water for at least 15 minutes. Get immediate medical attention.

INHALATION:

Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get immediate medical attention.

INGESTION:

Do not feed anything by mouth to an unconscious or convulsive victim. Do not induce vomiting. Immediately contact physician. Dilute contents of stomach using 3-4 glasses milk or water.

NOTES TO PHYSICIANS:

This product contains a hydrocarbon solvent. Aspiration into the lungs will result in chemical pneumonia and may be fatal.

5 FIRE FIGHTING MEASURES

FIRE FIGHTING INSTRUCTIONS:

Fire fighters should wear positive pressure self-contained breathing apparatus (full face-piece type).

EXTINGUISHING MEDIA:

dry chemical, carbon dioxide or foam--Avoid water if possible.

HAZARDOUS DECOMPOSITION PRODUCTS:

Thermal decomposition (destructive fires) yields elemental oxides.

FLASH POINT:

~ 150F ~ 66C P-M(CC)

MISCELLANEOUS:

Combustible liquid
NA1993;Emergency Response Guide #128

6 ACCIDENTAL RELEASE MEASURES

PROTECTION AND SPILL CONTAINMENT:

Ventilate area. Use specified protective equipment. Contain and absorb on absorbent material. Place in waste disposal container. Remove ignition sources. Flush area with water. Spread sand/grit.

DISPOSAL INSTRUCTIONS:

Water contaminated with this product may be sent to a sanitary sewer treatment facility, in accordance with any local agreement, a permitted waste treatment facility or discharged under a permit. Product as is - Incinerate or land dispose in an approved landfill.

7 HANDLING & STORAGE

HANDLING:

Combustible. Do not use around sparks or flames. Bond containers during filling or discharge when performed at temperatures at or above the product flash point.

STORAGE:

Keep containers closed when not in use. Store in cool ventilated location. Store away from oxidizers.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS

CHEMICAL NAME

NAPHTHALENE

PEL (OSHA): 10 PPM

TLV (ACGIH): 10 PPM

SOLVENT NAPHTHA, PETROLEUM, HEAVY AROMATIC

PEL (OSHA): NOT DETERMINED

TLV (ACGIH): NOT DETERMINED

MISC: Note- manufacturer's recommended exposure limit: 100 ppm.

DIETHYLENE GLYCOL MONOBUTYL ETHER

PEL (OSHA): NOT DETERMINED

TLV (ACGIH): NOT DETERMINED

FATTY ACIDS, TALL OIL, REACTION PRODUCTS WITH DIETHYLENETRIAMINE

PEL (OSHA): NOT DETERMINED

TLV (ACGIH): NOT DETERMINED

NONYLPHENOXYPOLYETHOXYETHANOL BRANCHED

PEL (OSHA): NOT DETERMINED

TLV (ACGIH): NOT DETERMINED

8) EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

ENGINEERING CONTROLS:

Adequate ventilation to maintain air contaminants below exposure limits.

PERSONAL PROTECTIVE EQUIPMENT:

Use protective equipment in accordance with 29CFR 1910 Subpart I

RESPIRATORY PROTECTION:

A RESPIRATORY PROTECTION PROGRAM THAT MEETS OSHA'S 29 CFR 1910.134 AND ANSI Z88.2 REQUIREMENTS MUST BE FOLLOWED WHENEVER WORKPLACE CONDITIONS WARRANT A RESPIRATOR'S USE.
USE AIR PURIFYING RESPIRATORS WITHIN USE LIMITATIONS ASSOCIATED WITH THE EQUIPMENT OR ELSE USE SUPPLIED AIR-RESPIRATORS.
If air-purifying respirator use is appropriate, use a respirator with organic vapor cartridges.

SKIN PROTECTION:

nitrile gloves-- Wash off after each use. Replace as necessary.

EYE PROTECTION:

splash proof chemical goggles

9 PHYSICAL & CHEMICAL PROPERTIES

Specific Grav. (70F, 21C)	0.924	Vapor Pressure (mmHG)	< 5.0
Freeze Point (F)	< -30	Vapor Density (air=1)	> 1.00
Freeze Point (C)	< -34		
Viscosity(cps 70F, 21C)	16	% Solubility (water)	< 0.0
Odor		Hydrocarbon	
Appearance		Amber To Dark Brown	
Physical State		Liquid	
Flash Point	P-M(CC)	~ 150F ~ 65C	

pH 5% Emulsion (approx.) 9.2
Evaporation Rate (Ether=1) < 1.00

NA = not applicable ND = not determined

10 STABILITY & REACTIVITY

STABILITY:

Stable under normal storage conditions.

HAZARDOUS POLYMERIZATION:

Will not occur.

INCOMPATIBILITIES:

May react with strong oxidizers.

DECOMPOSITION PRODUCTS:

Thermal decomposition (destructive fires) yields elemental oxides.

INTERNAL PUMPOUT/CLEANOUT CATEGORIES:

"B"

11 TOXICOLOGICAL INFORMATION

Oral LD50 RAT: 2,500 mg/kg
NOTE - Estimated value
Dermal LD50 RABBIT: 1,750 mg/kg
NOTE - Estimated value
Inhalation LC50 RAT: >2,000 ppm/hr
NOTE - Estimated value
Skin Irritation Score RABBIT: 6.5

12 ECOLOGICAL INFORMATION

AQUATIC TOXICOLOGY

Daphnia magna 48 Hour Static Acute Bioassay
LC50= 9.5; No Effect Level= 6.3 mg/L
Rainbow Trout 96 Hour Static Acute Bioassay
LC50= 3.3; No Effect Level= 1.8 mg/L

BIODEGRADATION

BOD-28 (mg/g): 1188
BOD-5 (mg/g): 462
COD (mg/g): 2220
TOC (mg/g): 805

13 DISPOSAL CONSIDERATIONS

If this undiluted product is discarded as a waste, the US RCRA hazardous waste identification number is :
Not applicable.

Please be advised; however, that state and local requirements for waste disposal may be more restrictive or otherwise different from federal regulations. Consult state and local regulations regarding the proper disposal of this material.

14 TRANSPORT INFORMATION

DOT HAZARD: Combustible liquid
 UN / NA NUMBER: NA1993
 DOT EMERGENCY RESPONSE GUIDE #: 128

15 REGULATORY INFORMATION

TSCA:

All components of this product are listed in the TSCA inventory.

CERCLA AND/OR SARA REPORTABLE QUANTITY (RQ):

197 gallons due to NAPHTHALENE; Treat as oil spill

SARA SECTION 312 HAZARD CLASS:

Immediate(acute);Delayed(Chronic);Fire

SARA SECTION 302 CHEMICALS:

No regulated constituent present at OSHA thresholds

SARA SECTION 313 CHEMICALS:

CAS#	CHEMICAL NAME	RANGE
91-20-3	NAPHTHALENE	6.0-10.0%
	GLYCOL ETHERS	21.0-30.0%

CALIFORNIA REGULATORY INFORMATION

CALIFORNIA SAFE DRINKING WATER AND TOXIC

ENFORCEMENT ACT (PROPOSITION 65) CHEMICALS PRESENT:

No regulated constituent present at OSHA thresholds

MICHIGAN REGULATORY INFORMATION

CAS#	CHEMICAL NAME
91-20-3	NAPHTHALENE

16 OTHER INFORMATION

NFPA/HMIS

CODE TRANSLATION

Health	2	Moderate Hazard
Fire	2	Moderate Hazard
Reactivity	0	Minimal Hazard
Special	NONE	No special Hazard
(1) Protective Equipment	B	Goggles,Gloves

(1) refer to section 8 of MSDS for additional protective equipment recommendations.

CHANGE LOG

	EFFECTIVE DATE	REVISIONS TO SECTION:	SUPERCEDES
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MSDS status:	28-JAN-1997		** NEW **
	01-APR-1997	12	28-JAN-1997
	07-APR-1997	3,5,13,14;EDIT:9	01-APR-1997
	20-APR-1998	2,3,8,15	07-APR-1997
	22-APR-1998	2,3,8,15	20-APR-1998
	17-AUG-2001	2	22-APR-1998
	24-JAN-2003	4,15	17-AUG-2001



GE Betz

✓ *Fact Sheet*

FuelSolv™ PB2020 Oil Preburner Additive

Addresses:

- sludge deposits
- water-related corrosion
- water-related combustion problems
- fouled burner problems

Provides:

- clean, sludge-free surfaces
- increased equipment reliability
- better fuel combustion
- clean burners and better operation
- lower costs associated with maintenance and downtime

DESCRIPTION AND USE

FuelSolv™ PB2020 is a specially-formulated blend, containing an organic sludge solvent/dispersant, water emulsifier, and corrosion inhibitor.

It works by reducing preburner sludge deposits, inhibiting corrosion (in the storage tanks, feed lines, and heaters of residual fuel oil systems), and emulsifying water into the oil phase. FuelSolv PB2020 may be used to dissolve existing sludge. It can also be used with a biocide to inhibit or eliminate microbiological growth.

TECHNOLOGY

Tank, oil line, and equipment problems are caused by sludge, water, and corrosion. Sludge is composed of settled heavy hydrocarbons, oxidized hydrocarbons, and inorganic solids that remain in small quantities after refining. Water sources include pickup during shipping, air condensation, ingress through open manways and vents, and/or leaking steam coils.

Sludge and water slugs carried into lines, strainers, heaters, pumps, and burner components cause erratic operation, flame out, and combustion problems. These problems lead to poor efficiency, excessive emissions and smoke, and reduced boiler reliability.

Tank corrosion results when acidic compounds from the oil, dissolved into the water phase, react with the metal at the water-metal interface. Unattended, corrosion can threaten the integrity of the tank structure requiring maintenance and possible replacement expense. The potential for tank failure can present a safety and environmental hazard.

Proper housekeeping and maintenance practices are important to minimize preburner problems, but alone may not eliminate the need for additive treatments. FuelSolv PB2020 provides the added protection needed to avoid problems associated with sludge, water, and corrosion.

TREATMENT AND FEEDING REQUIREMENTS

Feedpoint - FuelSolv PB2020 should be added directly to the fill line during oil delivery. It can also be added intermittently by slug feeding directly to the bulk storage tank, if recirculating capability exists.

Feedrate - Use FuelSolv PB2020 in accordance with control procedures GE Betz establishes for a specific application.

Dilution - FuelSolv PB2020 should be fed neat (undiluted).

Equipment - A diaphragm pump with a cast iron, stainless steel, or polypropylene body and a Teflon diaphragm is recommended.

PACKAGING INFORMATION

FuelSolv PB2020 is available in a wide variety of customized containers and delivery methods. Contact your GE Betz representative for details.

SAFETY AND PRECAUTIONS

A Material Safety Data Sheet containing detailed information about this product is available upon request.